Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:
Delaware / New Jersey / Pennsylvania 2014 ESI FISH Polygons, Lines

1.2. Summary description of the data:
This data set contains sensitive biological resource data for marine, estuarine, anadromous, and freshwater fish species in Delaware/New Jersey/Pennsylvania. Vector polygons in this data set represent fish distribution, concentration areas, spawning areas, and anadromous fish spawning runs. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Delaware/New Jersey/Pennsylvania. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the FISHL data layer, part of the larger Delaware/New Jersey/Pennsylvania ESI database, for additional fish information.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2013 to 2014

1.5. Actual or planned geographic coverage of the data:
W: -75.75, E: -74.0377, N: 40.2501, S: 38.375
This reflects the extent of all land and water features included in the overall Delaware Bay (Delaware, New Jersey, Pennsylvania) 2014 ESI study region. The bounding box for this particular feature class may vary depending on occurrences identified and mapped.

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
ESI Program Manager

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
orr.esi@noaa.gov

2.5. Phone number:

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:
ESI Program Manager

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality,

objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

For each species, the mapping extent was dependent upon information availability and location of mapped coastal habitats and shorelines.

Process Steps:

- 2014-03-01 00:00:00 - Fish species depicted in this atlas include select marine, estuarine, and freshwater species. Species of conservation interest, commercial or recreational importance, or ecological importance are emphasized. Fish polygons were created based on survey information, digital data, and expert opinion provided primarily by resource experts at Delaware Department of Natural Resources and Environmental Control (DNREC), New Jersey Department of Environmental Control Bureau of Marine Fisheries (NJDEP BMF) and the United States Fish and Wildlife Service (USFWS), but also Atlantic States Marine Fisheries Commission (ASMFC), Pennsylvania Fish and Boat Commission (PFBC), Virginia Institute of Marine Science (VIMS), and select published literature. DNREC staff provided independent sampling data for Delaware Bay, Delaware River, and the Inland Bays: Rehoboth and Indian River. NJDEP BMF staff provided independent sampling data for Delaware Bay, Delaware River, and the Atlantic Ocean. Relatively little data was available for Pennsylvania fishes. PFBC provided species lists for a number of Delaware River tributaries, based on electrofishing surveys done during spring to fall months. No data has been collected for the Delaware River by PFBC staff since 1996, so NJDEP BMF data was used as the primary source for species in the Delaware River.
- 2014-03-01 00:00:00 - The presence of a species for a given month in a given geography was based primarily on occurrence rates in the independent sampling data. Species that were caught more than one tenth of the time at sampling stations within a survey area and across the ten year sampling window were marked as ' present' for that month. In special cases the cut-off for presence was lowered, either based on review by DNREC or NJDEP BMF staff or because of low but consistent catch rates across all months. Presence during the winter months, i.e. those not surveyed by DNREC or NJDEP BMF staff, were added based on expert opinion or published literature. Estuarine Living Marine Resources (ELMR) data was used to fill in species information within certain geographies and for select species in DE and NJ waters. These geographies include Delaware Bay, the DE Inland Bays, Barnegat Bay, and the other smaller inland bays along the NJ coast. Concentrations and seasonality were adopted as is. Atlantic (FE, SE) and shortnose (FE, SE) sturgeon were mapped to areas where they are known to occur. Polygons were based on data provided by DNREC staff, The Nature Conservancy (TNC), published literature, and expert knowledge from DNREC staff and Dr. Fox, Delaware State University. Emphasis was given to mapping areas known to harbor large concentrations of

juveniles, large concentrations of wintering fish, and critical spawning grounds. Spawning runs for anadromous fish in the Delaware Bay region were mapped based on data from the ASMFC and TNC. ASMFC spawning data was used as the primary data source, and TNC data was used to fill in areas where coverage was lacking. Timing of spawning runs was gathered from published literature and reviewed by DNREC and NJDEP BMF staff. All concentration and seasonality information was reviewed by both NJDEP BMF and DNREC staff, and adjusted in some cases to be consistent with expert opinion. Please note, many species can be found in estuarine waters year-round but are significantly less common in the winter months. Where possible, seasonality and concentration information represents months in which a particular species is most likely to be encountered instead of all months a species could potentially be found in a location. For many species, the timing of life history events, i.e. spawning, was added based upon data from the following sources: 1) Able K. W., Fahay M. P. 1998. The First Year in the Life of Estuarine Fishes in the Middle Atlantic Bight.; 2) Dove, L.E. and Nyman, R.M. (eds.), 1995, Living Resources of the Delaware Estuary; or 3) the mid-Atlantic ELMR data.

- 2014-03-01 00:00:00 - FISH LINES: Spawning runs for anadromous fish in the Delaware Bay region were mapped based on data from the Atlantic States Marine Fisheries Commission (ASFMC) and The Nature Conservancy (TNC). ASMFC data included confirmed spawning areas for alewife, American shad, blueback herring, and hickory shad. TNC data only provided coverage of three species: alewife, American shad, and blueback herring. Data were provided as vector lines corresponding to streams and rivers in the Delaware Bay region. Where these spawning runs overlapped the ESI hydro layer they were converted to polygonal features; otherwise they were left as polylines. ASMFC spawning data was used as the primary data source, and TNC data was used to fill in areas where coverage was lacking. Timing of spawning runs was gathered from published literature and reviewed by Delaware Department of Natural Resources and Environmental Control (DNREC) and New Jersey Department of Environmental Protection Bureau of Marine Fisheries (NJDEP BMF) staff.
- 2014-03-01 00:00:00 - The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH and FISH LINES data layers. Depending on the type of source data, three general approaches are used for compiling the data layers: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:45,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the FISH and FISH LINES data layers are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:
- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

https://www.fisheries.noaa.gov/inport/item/55222

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

Office of Response and Restoration (ORR)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:

Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office of Response and Restoration - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions
Line and Staff Offices may extend this template by inserting additional questions in this section.